CIVIL-TECH CONSULTANTS AND ENGINEERS

Building & Highway Material Testing Laboratory

NABL - Accredited Laboratory as per ISO / IEC-17025 : 2005

Job No.: CTCE/BBMP/W.No.14/KRIDL/CEMENT/2014-15

Date: 04.07.2014

TEST REPORT

CLIENT	:	**Asst. Executive Engineer,** T. Dasarahalli Sub Division, BBMP, Bangalore.
AGENCY	:	**Technical Manager (West),** KRIDL, Bangalore.
NAME OF THE WORK	:	Improvement to road and drain at Nisarga Layout in Ward No.14, Bagalagunte, BBMP, Bangalore.
REFERENCE	:	BBMP/DZ/AEE/TDSD/PR/2014-15 Dated: 02.07.2014
SAMPLE ID	:	CEMENT
SAMPLES SUPPLIED BY	:	AGENCY

The results of the tests conducted on the cement sample are as follows:

Sl. No	Descriptions	Test Method as per IS	Test Result	Requirements as per IS: 8112-2013
1	Standard Consistency	IS-4031 (Part -4)	29.00 %	-
2	a) Initial Setting Time	IS-4031 (Part -5)	145 Minutes	Not Less than 30 Minutes
	b) Final Setting Time	IS-4031 (Part -5)	475 Minutes	Not More than 600 Minutes
3	Soundness) by the Le-Chatelier method	IS-4031 (Part 3)	1 mm	Not more than 10 mm

Note:

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Job No.: CTCE/BBMP/W.No.14/KRIDL/SAND/2014-15 : 04.07.2014

TEST REPORT ON FINE AGGREGATES
IS 383-1970 (RA- 2002)

Client : **Asst. Executive Engineer,** T. Dasarahalli Sub Division, BBMP, Bangalore.

Agency : **Technical Manager (West),** KRIDL, Bangalore.

Name of Work : Improvement to road and drain at Nisarga Layout in Ward No.14, Bagalagunte, BBMP, Bangalore.

Reference : BBMP/DZ/AEE/TDSD/PR/2014-15 Dated: 02.07.2014

Date of Testing : 04.07.2014

Material : Sand Total Wt. of Aggregates in gms **2000**

Is Sieve Size in mm	Weight Retained (gm)	Retained Weight in %	Cumulative Retained Weight in %	Cumulative Weight Passing in %	Spec.Limits For Zone-II
10	0	0	0	100	100
4.75	92	4.60	4.60	95.4	90-100
2.36	210	10.50	15.10	84.9	75-100
1.18	495	24.75	39.85	60.2	55-90
600 Micron	400	20.00	59.85	40.2	35-59
300 Micron	500	25.00	84.85	15.2	8-30
150 Micron	165	8.25	93.10	6.9	0-10

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Job No.: CTCE/BBMP/W.No.14/KRIDL/AGG/2014-15 : 04.07.2014

TEST REPORT ON COARSE AGGREGATES
IS 383-1970 (RA- 2002)

Client : **Asst. Executive Engineer,** T. Dasarahalli Sub Division, BBMP, Bangalore.

Agency : **Technical Manager (West),** KRIDL, Bangalore.

Name of Work : Improvement to road and drain at Nisarga Layout in Ward No.14, Bagalagunte, BBMP, Bangalore.

Reference : BBMP/DZ/AEE/TDSD/PR/2014-15 Dated: 02.07.2014

Date of Testing : 04.07.2014

Material : 40mm Aggregates

Total Wt. of Aggregates in gms **26000**

Is Sieve Size in mm	Weight Retained (gm)	Retained Weight in %	Cumulative Retained Weight in %	Cumulative Weight Passing in %	Spec.Limits
80	0	0	0	100	100
40	1005	3.87	3.87	96.13	95-100
20	16320	62.77	66.63	33.37	30-70
10	4825	18.56	85.19	14.81	10-35
4.75	2850	10.96	96.15	3.85	0-5

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Building & Highway Material Testing Laboratory

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Job No.: CTCE/BBMP/W.No.14/KRIDL/CUBE/2014-15

18.08.2014

TEST REPORT ON CONCRETE CUBES

Client	: **Asst. Executive Engineer,** T. Dasarahalli Sub Division, BBMP, Bangalore.
Agency	: **Technical Manager (West),** KRIDL, Bangalore.
Name of the work	: Improvement to road and drain at Nisarga Layout in Ward No.14, Bagalagunte, BBMP, Bangalore.
Reference	: BBMP/DZ/AEE/TDSD/PR/2014-15 Dated: 02.07.2014
Sample ID	: Cement Concrete
Size of cubes	: 150mmx150mmx150mm
Cross Sectional Area	: 22500 mm^2
Technical Reference	: IS: 516-1959 (Reaffirmed 2008)
Grade of Concrete	: M_{15}
Compressive Strength as on	: 28th day

Sl.No.	Date of casting	Date of testing	Weight of cube (Kg)	Failure load (KN)	Compressive strength (N/mm^2)
1	21.07.2014	18.08.2014	8.155	362.1	16.09
2	21.07.2014	18.08.2014	8.236	375.2	16.68
3	21.07.2014	18.08.2014	8.320	395.6	17.58

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Job No.: CTCE/BBMP/W.No.14/KRIDL/GSB-1/GR/2014-15 Date : 04.08.2014

GRADATION FOR GSB-I (CLOSE GRADED)
IS: 2720 (Part 4)

CIVIL ENGINEERING TESTING LABORATORY www.civiltechconsultants.com

Client : **Asst. Executive Engineer,** T. Dasarahalli Sub Division, BBMP, Bangalore.

Agency : **Technical Manager (West),** KRIDL, Bangalore.

Name of work : Improvement to road and drain at Nisarga Layout in Ward No.14, Bagalagunte, BBMP, Bangalore.

Reference : BBMP/DZ/AEE/TDSD/PR/2014-15 Dated: 02.07.2014

Date of Testing : 04.08.2014

Sample Source : GSB Mix Plant Bangalore. **Oven Dry Wt (gm) :** 25000

Is Sieve Size in mm	Weight Retained (gm)	Cumulative Weight Retained (gm)	Cumulative % of Retained	Cumulative % of Passing	Specified Limits
75.0	0	0	0.00	0	100
53.0	1145	1145	4.58	95.42	80-100
26.50	6335	7480	29.92	70.08	55-90
9.50	3290	10770	43.08	56.92	35-65
4.75	3575	14345	57.38	42.62	25-55
2.36	2000	16345	65.38	34.62	20-40
0.425	4985	21330	85.32	14.68	10-25
0.075	2570	23900	95.60	4.40	3-10
PAN	1100				
Total	25000				

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Job No.: CTCE/BBMP/W.No.14/KRIDL/WMM/Gradation/2014-15 08.08.2014

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GRADATION FOR WMM
MORTH TABLE-400-11

Client : **Asst. Executive Engineer,** T. Dasarahalli Sub Division, BBMP, Bangalore.

Agency : **Technical Manager (West),** KRIDL, Bangalore.

Name of Work : Improvement to road and drain at Nisarga Layout in Ward No.14, Bagalagunte, BBMP, Bangalore.

Reference : BBMP/DZ/AEE/TDSD/PR/2014-15 Dated: 02.07.2014

Date of Testing : 08.08.2014

Material : WMM

Sample Location : WMM Mix Plant Oven Dry Wt (gm): **25800**

Is Sieve Size in mm	Weight Retained (gm)	Cumulative Weight Retained (gm)	Cumulative % of Retained	Cumulative % of Passing	Spec.Limits
53	0	0	0	100	100
45	990	990	3.8	96.2	95-100
22.4	5480	6470	25.1	74.9	60-80
11.2	5235	11705	45.4	54.6	40-60
4.75	4885	16590	64.3	35.7	25-40
2.36	3600	20190	78.3	21.7	15-30
0.600	2235	22425	86.9	13.1	8-22
0.075	2225	24650	95.5	4.5	0-8

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Job No.: CTCE/BBMP/W.No.14/KRIDL/SDBC/Bitumen/2014-15 14.08.2014

BITUMEN CONTENT DETERMINATION OF SEMI DENSE BITUMINOUS CONCRETE MIX

As per IRC:SP:11-1984

CLIENT	**Asst. Executive Engineer,** T. Dasarahalli Sub Division, BBMP, Bangalore.
AGENCY	**Technical Manager (West),** KRIDL, Bangalore.
NAME OF THE WORK	Improvement to road and drain at Nisarga Layout in Ward No.14, Bagalagunte, BBMP, Bangalore.
REFERENCE	BBMP/DZ/AEE/TDSD/PR/2014-15 Dated: 02.07.2014
SAMPLE I/D	Roads in Nisarga Layout in Ward No.14.
DATE OF TESTING	14.08.2014

BITUMEN CONTENT DETERMINATION

Description	Trail 1	Trail 2
1. Weight of Mixture before Test, g	500	500
2. Weight of Mixture after Test, g	474.5	474.5
3. Weight of Asphalt and Mineral matter Extracted, g	-	-
4. Weight of Mineral Matter, g.	-	-
5. Weight of Ash, g		
6. Weight of Bitumen Extracted, g. (corrected)	25.5	25.50
7. Bitumen content in %	5.10	5.10
8. Average	**5.10**	

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Job No.: CTCE/BBMP/W.No.14/KRIDL/SDBC/Bitumen/2014-15 14.08.2014

GRADATION DETERMINATION OF SEMI DENSE BITUMINOUS CONCRETE MIX

As per IS2386 and IRC:SP:11-1984

CLIENT	**Asst. Executive Engineer,** T. Dasarahalli Sub Division, BBMP, Bangalore.
AGENCY	**Technical Manager (West),** KRIDL, Bangalore.
NAME OF THE WORK	Improvement to road and drain at Nisarga Layout in Ward No.14, Bagalagunte, BBMP, Bangalore.
REFERENCE	BBMP/DZ/AEE/TDSD/PR/2014-15 Dated: 02.07.2014
SAMPLE I/D	Roads in Nisarga Layout in Ward No.14.
DATE OF TESTING	14.08.2014

GRADATION AFTER EXTRACTION

Sieve Size in mm	Trail 1				Specified Limits as per MORTH specification table 500-15 (Grading-2)
	Weight Retained, gm	% Retained	%Cummulative Retained	% Passing	
13.2	0	0	0	100	100
9.5	37.85	7.98	7.98	92.02	90-100
4.75	262.2	55.26	63.23	36.77	35-51
2.36	50.23	10.59	73.82	26.18	24-39
1.18	37.85	7.98	81.80	18.20	15-30
0.3	35.26	7.43	89.23	10.77	9-19
0.075	22.65	4.77	94.00	6.00	3-8

Sieve Size in mm	Trail 2				Specified Limits as per MORTH specification table 500-15 (Grading-2)
	Weight Retained, gm	% Retained	%Cummulative Retained	% Passing	
13.2	0	0	0	100	100
9.5	37.25	7.85	7.85	92.15	90-100
4.75	263.3	55.49	63.34	36.66	35-51
2.36	53.21	11.21	74.55	25.45	24-39
1.18	33.36	7.03	81.58	18.42	15-30
0.3	34.52	7.28	88.86	11.14	9-19
0.075	33.25	7.01	95.87	4.13	3-8

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